

LAMBERT'S "DESCRIPTION OF THE GENUS PINUS,"
1832 EDITION

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Aylmer Bourke Lambert's classic work on conifers, "A Description of the Genus Pinus," with large, natural-size, hand-colored plates, was issued in five editions over a period of years from 1803 to 1842. The irregular contents, including differences among editions and great variation among copies of the same edition, which have been a source of confusion to later authors, have been described in detail by Renkema (19) and by Renkema and Ardagh (20). My note (16, p. 587-588) called attention again to the names of conifers published in the extra, unnumbered pages of some copies of volume 2 of the third or 1832 edition, or "editio minor," an octavo edition in two volumes (13).

Keck (12) has reported two copies of this 1832 edition, at Stanford University and the University of California, which contain among the extra pages the text descriptions and colored plates of two names not previously noted in this edition. The Stanford copy has nine more extra plates without text and five unlabeled colored drawings. On the basis of these two copies, Keck changed the citation of *Pinus Coulteri* D. Don to this edition (previously dated from D. Don, Linn. Soc. London Trans. 17: 440. 1836). For the bristlecone fir, or "Santa Lucia fir," he replaced *Abies venusta* (Dougl.) K. Koch with *A. bracteata* (D. Don) Nutt., based upon *Pinus bracteata* D. Don in this edition. He suggested also that possibly *Abies Smithiana*, *Pinus Llaveana*, and *Taxus Harringtonia* were properly published by Lambert in this Stanford copy under Article 44 of the International Rules (Ed. 3. 1935).

As it seemed unlikely that the two copies described by Keck could have been published in 1832, a reexamination of this edition has been made to determine the dates of the extra pages. Very few nomenclatural changes are involved, as most names here also have priority from publication elsewhere and appeared again in the folio volume 3 of 1837.

SUMMARY OF THE FIVE EDITIONS

A brief summary of the five editions of Lambert's work, condensed from Renkema and Ardagh (20) and showing the relationships of the 1832 edition, is given below. The different editions are not designated by number on the title pages and have not been counted uniformly by later authors. Botanists have cited only the first three editions, as the last two contain no new names. After the first folio volume, all descriptions were by David Don, according to statements in the prefaces. He should be cited as the

author of the new names published in volume 2 (1824) and later editions.

Edition 1, folio. Volume 1, 1803. The appendix was published probably in 1807, according to watermark dates of the paper and other records. Volume 2, 1824.

Edition 2, folio. Volumes 1 and 2, 1828. Volume 3, 1837. Volume 3 is cited by some authors as a part of the first edition, which it completed also. A few copies of volume 3 apparently completed the third edition too.

Edition 3, octavo, or "editio minor." Two volumes, 1832. Some copies of volume 2 have 10 to 22 extra pages inserted between pages 144 and 145. By some authors called the second edition.

Edition 4, folio. Three volumes, 1837, according to title pages but dated by watermarks as 1837-42. Essentially a reprint of the second edition.

Edition 5, octavo. Two volumes, 1842. The text forms volume 1, octavo, and the plates form volume 2, folio. A reissue of the 1832 edition with 30 extra pages between pages 144 and 145 and with the plates in a separate volume of larger size.

The great variation in contents among different copies of the same edition, which Renkema and Ardagh reported at length, need not be emphasized again here. They noted (20, p. 441) that each issue of the work appeared to be made up, with many irregularities, from the material available, at the time, to the publishers. Some volumes do not have tables of contents nor numbered plates. In contrast with scientific books of larger circulation, this publication was an expensive work of art with large, natural-size engravings colored individually by hand and was issued in rather small editions to wealthy subscribers. A few plates were lithographed. Renkema and Ardagh did not state the number of copies of each edition but quoted (20, p. 443, 466) notes about the 25 original colored copies of the first folio volume of 1803, which sold for 40 guineas (about \$200) each, and uncolored copies (150?) for 10 guineas (about \$50) each. Apparently a few copies of the later volumes were assembled individually for or by the purchasers.

Several copies contain unprinted material, including original drawings, and plates from published works by other authors. For example, Renkema and Aradagh (20, p. 447) noted that the Kew copy of the 1832 edition has some letters from George Bennett to Lambert inserted. I have examined the Arnold Arboretum copy of the 1842 edition, which as they reported (20, p. 449; also Cat. Libr. Arnold Arboretum 1: 409. 1914), has five inserted or added original drawings and one inserted plate of *Pinus Lemoniana* Benth. (a synonym of *P. Pinaster* Ait.) from another work (Hort. Soc. London Trans., ser. 2, v. 1, pl. 20. 1835).

There are also "mixed" copies assembled from parts of two editions. A folio at the Linnean Society, according to Renkema and Ardagh (20, p. 463-464), was made up of plates from volume 2, 1824, and both volumes 1 and 2, 1828. I have checked the irregular copy of folio volume 2 at the Arnold Arboretum, which is a mixture of the 1824 and 1828 editions (20, p. 444), with both prefaces but title page dated 1824.

CONTENTS OF THE 1832 EDITION

The 2-volume octavo edition of 1832, according to Loudon (18, 1: 188), was published "in conformity with the spirit of the times" at a reduced price of 12 pounds, 12 shillings (afterwards cut to 8 pounds, 8 shillings). Renkema (19, p. 13) quoted similar current prices from book auctions. More copies of this cheaper and possibly larger edition have come to libraries in the United States than have copies of the more expensive folios.

Several additional species not appearing in the earlier folio editions but repeated in the folio volume 3 of 1837 were included among the numbered pages of the 1832 edition. Volume 1 of the 1832 edition had a new species, *Pinus sinensis* D. Don, now combined with *P. Massoniana* Lamb. (1803), and four Mexican pines, including three recently described and one as a new name. References to a publication of 1830 were cited under *Pinus Teocote* Schiede & Deppe (Linnaea 5: 76. 1830) and under *P. Montezumae* D. Don, proposed here as a new name for *P. occidentalis* H. B. K. and Schiede & Deppe (Linnaea 5: 76. 1830), not Swartz. *Pinus patula* and *P. leiophylla* (Linnaea 6: 354. 1831) were cited as "Schiede & Deppe MSS," as an indication that the published article of 1831 was not available at the time of writing.

Renkema and Ardagh (20, p. 447) noted that the unnumbered plates varied greatly in different copies of the 1832 edition and cited copies with 72, 75, 76, 81, 85, 103, 107, and 111 plates. They stated (p. 448) that the plates were re-engravings of parts of the original ones or reductions from them with the folio plates folded or closely trimmed. Renkema (19) also published a photograph illustrating a folded and cut plate. Some copies, such as those at Kew, New York Botanical Garden, and University of California, are the size of folios, composed of the folio plates and the text inlaid, two copies of the text pages being pasted on larger blank sheets.

Between the last page of sheet K 2 (p. 144) and the first one of sheet L 2 (p. 145) there is an unnumbered sheet which apparently did not form part of the original work (20, p. 448). Copies vary greatly in the number of extra pages, from 10 to 22 or none, and in their order. The several species of *Pinus* described on the unnumbered, extra pages are not listed in the 4-page synoptical table of species at the end of the volume (p. [185-188]) but are in the nature of appendices which may be taken as "fore-runners"

of folio volume 3 of 1837 (20, p. 447). The descriptive and illustrated text ends with page 144, and pages 145-183 are supplementary articles and letters by other persons. Thus, the natural place for insertion of additional species is after page 144, rather than after the unrelated articles of the appendix.

The contents of the extra pages, including plates and drawings, of nine copies in the United States and of this edition as listed by Renkema and Ardagh (20, p. 456-458) are summarized in Table 1, followed by further notes on each book examined. Renkema (19, p. 25) listed also an unnumbered plate of *Pinus nobilis*. My previous note (16, p. 587-588) was based upon four copies. Now I have examined four more and a microfilm reproduction of the extra pages of the Stanford University copy. Two others have been checked for me. With one exception all nine copies with extra pages are different. It would be interesting to know if other libraries possess copies with further variations and additions of possible significance in nomenclature.

New York Public Library. This is the only copy without extra pages which I have seen.

Massachusetts Horticultural Society. According to the published library catalog, this copy, which I have not examined, has in the two volumes 70 plates, 69 colored and the portrait, and therefore no extra plates nor pages. Miss Dorothy S. Mauks, librarian, reports that the copy evidently is not complete.

Academy of Natural Sciences of Philadelphia. Two of the ten extra pages, on *Pinus dumosa* and *P. Douglasii*, were inserted in proper order between pages 82 and 83, after the same species, *P. dumosa* and *P. taxifolia*. The eight extra pages of notes are absent.

New York Botanical Garden. Owned by Columbia University, this copy with 14 extra pages is a folio with pages 37.5 by 27 cm. Mrs. Elsie Phillips kindly has furnished a list of the extra pages and plates. One extra page on the topic, "Observations on the coniferous trees of New Zealand," is lacking.

Gray Herbarium. Among the regular plates in both volumes are three legible watermark dates of 1829 as well as cut dates of possibly the preceding and following years. The back sheet of the plate of *Pinus Sabiniana* bears the watermark date 1831.

Library of Congress. This rebound copy, 28.5 by 18.5 cm., has pages 27.3 by 17.5 cm. The watermarks in both volumes are 1828 and 1829, with the back sheet of the extra plate of *Pinus nobilis* dated 1833. This copy differs from the Gray Herbarium copy only in the order of two pages.

Rancho Santa Ana Botanic Garden. The number and arrangement of the extra plates is the same as in the copy at Library of Congress. Dr. P. A. Munz has checked this copy for me.

Arnold Arboretum. The dark green binding perhaps is the

original, except for a new cloth strip on the back. The only watermark dates found, all in the regular plates, were 1828 and 1829.

Boston Public Library. This copy, apparently in its original dark green binding in part leather, has pages 26.5 by 19.5 cm. and is catalogued as quarto. The wide inner margin of nearly 5 cm. on the text pages was made possible by the use of two sets of text sheets. Some plates are lithographed, not engraved, and for plate 65, *Cupressus lusitanica*, an original drawing has been substituted. The original drawings are on double thicknesses of paper, and the back sheets of a few are portions of discarded plates with the plate concealed inside. The plate of *Pinus Coulteri* is taken from Forbes, *Pinetum Woburnense* (1839).

University of California. Lent for my examination through an interlibrary loan, this copy is a folio with pages 37 by 27 cm., bound in modern green buckram. Volume 2 begins with *Pinus microcarpa*, page 88, instead of *P. Webbiana*, page 77, as in the usual arrangement. Backing sheets of three regular plates of volume 2 bear watermark dates of 1836. Another watermark probably is 1835, and a flyleaf is watermarked 1837. Plate 65, *Cupressus lusitanica*, is lithographed. The drawing of *Pinus Menziesii*, on thinner paper of a different kind, was not fastened to the binding but obviously was pasted in later. This copy has more watermark dates on the extra plates than any other examined, five of 1836 and one of 1835.

Stanford University. I am greatly indebted to Dr. Ira L. Wiggins for a microfilm negative of the pages and plates between pages 144 and 145 of this copy, as well as notes on watermarks and plate numbers. Dr. David D. Keck kindly has furnished information about the plates and watermarks of this copy also. Watermark dates of 1823, 1833, 1838, and 1839 are found in the regular plates. Among the extra plates, two have watermark dates of 1838 and one of 1839. As summarized in Table 1, 11 of the 14 extra plates in this volume are taken from Forbes, *Pinetum Woburnense* (1839). In addition to 8 plates without text, 3 plates inserted to accompany Lambert's text are also from Forbes: *Pinus Gerardiana*, *P. monticola*, and *P. Coulteri*.

In comparison, the fifth edition, published in 1842, is a reissue of the 1832 edition but with the number of extra pages increased to 30. As noted by Renkema and Ardagh (20, p. 449-450), the date on the title page was changed, the synoptical table of species was placed after the preface instead of at the end and was followed by a new table of the species and articles of the appendix. The text pages of the Arnold Arboretum copy, which I examined, appear identical with those of the 1832 edition except for pages 81 and 82, where the almost identical extra pages on *Pinus dumosa* and *Pinus Douglasii* have been substituted and glued in. The 14

species described and illustrated in the extra pages had appeared in the folio volume 3 of 1837 and included those in the extra pages of the 1832 edition. Thus, by means of the extra pages the two-volume octavo edition now was expanded to duplicate the third folio volume as well as the first two.

NAMES IN THE EXTRA PAGES

That the names in the extra pages of the octavo edition were first published there was suggested to me by a bibliographic manuscript on Lambert's work by Marjorie F. Warner in the Library of the Department of Agriculture, Washington, D. C. My note (16, p. 587-588) accepting these names as of 1832 mentioned contemporary and recent authors citing these extra pages. These contemporary works included Lindley (15), Lawson (14), Loudon (18), Forbes (7), and Hooker (10). Antoine (1) also cited this edition for *Pinus Gerardiana* (p. 29), *P. Sabiniana* (p. 30), and *P. nobilis* (p. 77).

That certain volumes or parts of Lambert's work were issued after the dates on the title pages was demonstrated by Renkema and Ardagh on the evidence of watermark dates in the paper, contemporary publications, and bibliographic sources. In the absence of proof to the contrary, the date on the title page must be accepted (International Rules, Article 45). The manufacturer's watermark dates in the paper, where present, establish the earliest year in which a volume could have been issued. By watermarks with other records the appendix of volume 1 was dated as 1807 and the fourth edition as 1837-42 [Renkema and Ardagh 20, p. 442 and 449; also Cat. Books Brit. Mus. (Nat. Hist.) 3: 1050. 1910]. I have applied the same method in dating copies of the 1832 edition, which has no watermarks on the text sheets but has a few, often partly cut, watermark dates on the reduced or trimmed plates or on additional sheets forming backs of plates. As summarized in Table 1, four copies bear watermark dates after 1832, one in 1833 and the others in 1837, 1838, and 1839. Most watermarks bear the name "J. WHATMAN."

According to evidence from contemporary works, probably most copies which have extra pages with the first six new species were published within a short time after copies without extra pages. Nine of the eleven copies examined contain a minimum of ten extra pages, and Renkema and Ardagh (20, p. 447-448) cited several copies with extra plates. The fact that most species in the extra pages are without plates, while each species in the folio volume 3 of 1837 is illustrated, suggests publication before 1837.

The content of the extra pages offers some evidence on the dates. Two extra pages, apparently the first, were intended as substitutions, not new species. On one extra page *Pinus Douglasii*

Sabine was adopted as a new name for *P. taxifolia* Lamb. (Descr. Genus Pinus 1: 51, pl. 33. 1803), Douglas-fir, of page 82, with a text reference to an extra, though absent, numbered plate (pl. 78). The back of this sheet was a substitute page of notes about *Pinus dumosa* D. Don (Descr. Genus Pinus 2: 7. 1824; not seen), of pages 80–81. The content of the extra page was the same as that of page 81, but the typography differed. *Pinus Gerardiana* (pl. 79) and *P. Sabiniana* (pl. 80) apparently were the first added species as they were the only inserted species with numbered plates and with plates uniformly present. The other four new species were without references to plates, which were lacking in most copies. *Pinus Menziesii* had no illustration, exclusive of drawings, in any copy examined.

David Don published in the extra pages these five new species with authorship "*Douglas. MSS.*": *Pinus Sabiniana*, *P. monticola*, *P. nobilis*, *P. grandis*, and *P. Menziesii*. Under the first he explained:

"Mr. Douglas has named the species in compliment to his early friend and patron Mr. Sabine, the late zealous Secretary of the Horticultural Society, to whom I am indebted for the following account of the tree by Mr. Douglas, in whose Herbarium there are several other hitherto unpublished species of this genus, some of which are equally remarkable with the one above described, for the peculiarities to be observed in their habit and structure. In order to secure to Mr. Douglas the credit of these interesting discoveries, I have subjoined descriptions of them."

David Douglas (1799–1834) was botanical explorer for the Horticultural Society of London, now the Royal Horticultural Society (11, 6, 9). As implied by the word "late" in the quotation above, Joseph Sabine (1770–1837) was secretary of the Society until his resignation in the upheaval of 1830 (9, p. 149–150, 190–192). It is unfortunate that Douglas, who left England in 1829 for the last time and met a tragic death in 1834, did not formally publish descriptions of all the new conifers he named and introduced to horticulture. Eighty years later his lost manuscript, "Some American Pines," was discovered and published as an appendix of his journal (6, p. 338–348). Here *Pinus monticola* was described apparently as new. Six other species, among them *P. Douglasii*, *P. Menziesii*, and *P. nobilis* of the extra pages, had brief Latin diagnoses followed by the incomplete citation, "Sabine in Trans. Hort. Soc. Vol." Obviously Douglas prepared this manuscript before the delayed news of Sabine's resignation reached him, not later than 1832, when he resigned also. After relinquishing his position, Sabine did not publish these new species in the Transactions (6, p. 338), though the quotation above indicates that he assisted Don in getting the names published in Lambert's work. Don's descriptions of these four species are not the descriptions prepared by Douglas. In a recent note (17), pre-

pared in connection with this study, I have compiled a list of Douglas' seventeen new species of conifers.

Pinus Sabiniana was described by Douglas' (5) also in an article dated at California, February 4, 1831, read (in his absence) April 3, 1832, and published in 1833. In the text of the extra pages D. Don quoted three paragraphs, slightly modified, from Douglas' manuscript. Lack of reference to Douglas' article indicates that it was then unpublished. In volume 3 of the 1837 folio edition Douglas' article was cited: "Pinus Sabiniana. Douglas in Linn. Trans. 16, p. 749." As the 1837 volume now added plates to the descriptions of Douglas' other new species, the last sentence quoted above was changed accordingly: "In order to secure to Mr. Douglas the credit of these interesting discoveries, I have given descriptions and figures of them in the present volume."

As the names in the extra pages appeared also in the third folio volume in 1837, citations before 1837 are more significant than later ones. The earliest reference to names in the extra pages I have located is that under *Abies* in the Penny Cyclopaedia in 1833, an unsigned article credited to Lindley (15), whose name was mentioned on page 34 (Jour. Bot. 3: 386. 1865). Here were the new combinations in *Abies* of *A. grandis* (p. 30), *A. nobilis* (p. 30), and *A. Menziesii* (p. 32), all three credited under *Pinus* to Douglas and Lambert, and on page 32, "*Abies Douglasii*; the Douglas Fir (*Pinus taxifolia* Lambert Monogr., No. 43; *Pinus Douglasii*, Id. t. 47 and 48)." The absence of *Pinus bracteata* from Lindley's monographic treatment indicates that this species was not in Lindley's copy of Lambert's work. Unfortunately, the species of *Pinus* proper cannot be dated by the Penny Cyclopaedia because it was issued alphabetically in installments, the article on *Pinus* appearing in volume 18 in 1840. Lawson (14, p. 354) cited the extra pages when he mentioned the figure of the cone of *Pinus Sabiniana* in the "latest edition" of Lambert's work. A few other species of the extra pages were included, but Lawson omitted authors and citations. He noted that *Abies Menziesii* was discovered and named by Douglas.

Bentham (2, p. 404) listed seven species of *Pinus* in a report read January 21, 1834, and published in 1835, on plants raised by the Horticultural Society of London from seeds received from its explorer, David Douglas, in the years 1831, 1832, and 1833. These names given by Douglas, merely mentioned because the living plants were too young for description, were: *Pinus amabilis*, *P. grandis*, *P. insignis*, *P. Menziesii*, *P. monticola*, *P. nobilis*, and *P. Sabiniana*. Of these, *Pinus amabilis* and *P. insignis* were *nomina nuda* here. Though Bentham cited no published references, the other five were described in the extra pages of Lambert's work and four had been published elsewhere in 1833.

That *Pinus bracteata* and *P. Coulteri* were not published in 1832 but appeared in extra pages of copies issued sometime later is shown clearly by watermark dates (1837, 1838, and 1839), by historical records of the collector, and by references by contemporary authors. No contemporary citations of these two names as having been published in the octavo edition were found.

Biographical data of Dr. Thomas Coulter (1793-1843), the collector, place the date of discovery of these two species as 1832, the arrival of his collection in England as 1834, and publication of the names as 1836. According to Coville (3), Coulter, who had come to Mexico in 1825 as a physician with an English mining company, arrived at Monterey, California, in November 1831. Remaining there until March 1832 and perhaps collecting with David Douglas, Coulter then made a trip to the mouth of the Gila River in Arizona and returned to Monterey in July. After further collecting there, he brought his botanical collections and manuscripts to Europe by way of Mexico in 1834. The only new species published from Coulter's collection before his death in 1843, aside from some cacti sent to A. P. de Candolle and *Cupressus Coulteri* Forbes (1839), described from sterile young plants, were *Pinus bracteata*, *P. Coulteri*, and three other California pines by David Don (4) in his paper read June 2, 1835, and published the next year. Don's articles doubtless appeared before the few copies of the octavo edition with extra pages bearing his same two descriptions, even though there were no cross references. The article contains an extra sentence dedicating *P. Coulteri* to its discoverer, "at the suggestion of Mr. Lambert." The other three species in the article, described from cones only, *P. muricata*, *P. radiata*, and *P. tuberculata* (afterwards combined with the preceding), are not in the extra pages. All five species were included with plates in folio volume 3 of 1837, with D. Don's article cited. The text for *P. bracteata* and *P. Coulteri* in the extra pages of the octavo edition is the same as in the 1837 edition, except that D. Don's article was not cited, and may have been prepared before publication of the Transactions in 1836.

Further information on species in the extra pages is found in letters of David Douglas (11, 6, 9). On October 11, 1830, Douglas (11, p. 147) shipped from the mouth of the Columbia River to England a bundle of six species of *Pinus*, including *P. nobilis* and *P. grandis*, the latter a new species added on his last journey. He arrived at Monterey, California, on December 22, 1830, and in a letter from there dated November 23, 1831, mentioned the arrival of Dr. Coulter after he began the letter. Douglas sailed in August 1832 for the Hawaiian Islands, and while there shipped his Californian seeds and plants to England. The bristlecone fir, discovered in March 1832, was published posthumously in 1836 as *Pinus venusta* in a letter to Hooker dated October 23, 1832 (11, p.

152). In a letter of April 9, 1833, Douglas expressed the hope that Hooker include in the *Flora Boreali-Americana* *Pinus venusta* and other pines he discovered. Elwes and Henry (*Trees Great Brit. Ire.* 4: 797. 1909) summarized the accounts of the discovery of the bristlecone fir by Coulter and Douglas. The recently published, detailed biography of Douglas by Harvey contains much information hitherto unpublished and describes the meeting of Douglas and Coulter at Monterey (9, p. 180-184).

J. C. Loudon (18, 4: 2348), who recorded historical data as well as botanical, noted that the bristlecone fir (as *Picea bracteata*) was discovered by Douglas in March 1832 and was found also by Dr. Coulter but was not yet introduced. According to Loudon (18, 4: 2251), *Pinus Coulteri* was discovered by Dr. Coulter, "in what year is not stated," and "at the suggestion of Mr. Lambert, Professor Don named this species after Dr. Coulter (who appears to have discovered it about the same time as Douglas)." Cones and specimens were sent home by Douglas in 1832. Plants were raised from Douglas' seed the following year, and one of these, seven feet tall in September 1837, was illustrated (fig. 2147). Loudon explained that Douglas' material was sent as a variety of *Pinus Sabiniana* but that Don agreed that it was the same as *P. Coulteri*. Thus, the absence of a specific name for this pine by Douglas is clear. However, Lindley considered Douglas' specimen distinct from Coulter's and called it *Pinus macrocarpa* Lindl. (*Edw. Bot. Reg.* [Misc.] 26: 62. 1840). Douglas' other species in the extra pages definitely were received in time for insertion in the octavo edition as it was being published in 1832, according to Loudon's records (18). The following were introduced to horticulture in 1831: *Pinus monticola*, *P. nobilis*, *P. grandis*, and *P. Menziesii*. *Pinus Douglasii*, which Menzies had discovered in 1797, was introduced by Douglas in 1826. After his specimens collected in 1826 were lost, Douglas rediscovered *P. Sabiniana* in 1831, wrote the manuscript dated February 4, 1831, and sent the specimens received in 1832.

NAMES IN THE EXTRA PLATES

Three copies examined, as shown in Table 1, contain extra plates without text and not listed by Renkema and Ardagh. Some of these plates are the same as in the third folio volume of 1837. As listed by Keck (12), the Stanford University copy contains eight extra labeled plates without text, of which these five were not listed by Renkema and Ardagh for any edition of Lambert: *Cupressus horizontalis*, *Juniperus chinensis*, *J. excelsa*, *Pinus Llaveana*, and *Taxus Harringtonia*. The first plate listed, *Abies Smithiana*, obviously was from some other work, because Lambert never did accept the genus *Abies* in any edition but used *Pinus* in the broader, Linnaean sense to include *Abies* and other genera.

By consulting Stapf's Index Londonensis (21), I readily located the source of these plates as Forbes' Pinetum Woburnense (7), another volume of similar size (27.5 cm., pages 26.5 by 18 cm.) with hand-colored plates and issued in a limited edition of 100 copies, the one examined now in the Library of Congress. The only general works on conifers contemporaneous with Lambert and having colored illustrations of these species were Forbes (7) and Antoine (1). Lambert's third folio volume of 1837 included three, Antoine had four, and Forbes had plates of all eight species. For *Taxus Harringtonia* the only illustration cited was by Forbes. The plates of Lambert and Forbes were listed also by Bohn (8, Appendix, p. vii-x). The microfilm copy of these Stanford University plates confirmed their source as Forbes. These plates from Forbes in the Stanford University copy seem to belong to Lambert's work as they bear the same engraver's name, E. S. Weddell. A few still have Forbes' original plate numbers though partly erased, and many numbers among the regular plates have been erased also. Even the plates of three species illustrated also in Lambert's third folio volume of 1837 (*Pinus Smithiana*, *P. brutia*, and *Araucaria Cunninghamii*) were taken from Forbes, though another plate labeled in pencil "Pindrow" represents *Pinus Pindrow* of the 1837 volume of Lambert.

Thus, the Stanford University copy is not the first publication of names appearing in any extra plates without text. Citations for the three names mentioned by Keck as possibly properly published in this copy are: *Abies Smithiana* (Wall.) Lindl. Penny Cycl. 1: 31. 1833 [now *Picea Smithiana* (Wall.) Boiss.]; *Pinus Llaveana* Loud. Arb. Frut. Brit. 4: 2267, fig. 2177-2179. 1838 (synonym of *P. cembroides* Zucc. 1832); and *Taxus Harringtonia* Knight ex Forbes, Pinet. Woburn. 217, pl. 66. 1839 [now *Cephalotaxus drupacea* var. *pedunculata* (Sieb. & Zucc.) Miq.]. According to Forbes, *Taxus Harringtonia* was not introduced until 1837 and his sterile figure was from the original plant. Even if they were original, the eight names on extra plates of the Stanford University copy, like original drawings, would not be effectively published (International Rules, Article 36). Particularly in an expensive work of limited circulation and varying contents, insertion of names in a single copy issued afterwards (or two or three copies as in the cases of *Pinus bracteata* and *P. Coulteri*) would not be considered as publication.

SUMMARY OF NAMES IN THE EXTRA PAGES

Names published in the unnumbered extra pages between pages 144 and 145 in volume 2 of the third, or octavo, edition (1832) are cited below without synonymy under the names now accepted.

TABLE I. CONTENTS OF EXTRA PAGES AND PLATES IN COPIES OF LAMBERT'S DESCRIPTION OF THE GENUS PINUS, ED. 3 (OCTAVO), V. 2, 1882.

| Rankema and Ardagh's list | Acad. Nat. Sci. Phila. | N. Y. Bot. Garden | Herbarium | Library of Congress* | Arnold Arboretum | Boston Publ. Libr. | Univ. California | Stanford Univ. |
|-----------------------------------------------------------------------------|---------------------------|----------------------|-------------------|-------------------------|---------------------|-------------------------------------|------------------------------------|-------------------------------------|
| Latest watermark date | 1880 | | 1881 | 1883 | 1829 | 1838 | 1887 | 1889 |
| No. extra pages | 10 (1 blank) | 14 | 16 (1 blank) | 16 (1 blank) | 18 (1 blank) | 20 (2 blank) | 18 (1 blank) | 22 (3 blank) |
| No. extra plates | 2 | 3 | 3 | 3 | 3 | 7 | 11 | 14 |
| No. original drawings | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 5 |
| TEXT AND PLATES | | | | | | | | |
| <i>Pinus Graydonia</i> | [3.] pl. | [1.] pl. | [1.] pl. | [1.] pl. | [5.] pl. | [7.] pl. | [7.] pl. | [3.] pl. (1889, Forbes) |
| <i>Pinus Sabotiana</i> (2 pages) | [4-5.] pl. | [9-10] pl. | [2-3.] pl. (1881) | [2-3.] pl. | [6-7.] pl. | [9-9] pl. | [6-9] pl. | [4-8.] pl. |
| <i>Pinus monticola</i> | [6.] pl. | [14.] | [6.] | [6.] | [9.] | [10.] dr. | [10.] pl. | [9.] pl. (Forbes) |
| <i>Pinus ponderosa</i> | [7.] pl. | [13.] pl. | [5.] pl. | [5.] pl. (1883) | [10.] | [11.] dr. | [11.] pl. | [10.] pl. |
| <i>Pinus Menziesii</i> | [8.] pl. | [11.] | [5.] pl. | [9.] | [11.] | [12.] dr. | [12.] pl. (1835) | [9.] pl. |
| Blank page | [8?] pl. | [11] | [8] | [10] | [2.] | [5.] dr. | [1.] dr. | [12] |
| <i>Pinus Douglasii</i> | [9.] pl. | [11] | [9] | [10] | [3.] | [6.] dr. | [2.] | [8, 11, 13] |
| <i>Pinus attenuata</i> | [10.] | [11] | [10] | [11] | [4.] | [7.] dr. | [1.] | [11] |
| Notes drawn by the Moreton Bay | [11-12] | [3-4] pl. | [9-10] | [7-8] | [11-12] | [19-20] (after p. 184) | [11-12] (after p. 184) | [15-16] (after p. 184) |
| Pine (2 pages) | [11-12] | [2, 6-8] | [11-16] | [11-16] | [13-18] | [13-18] (after p. 184) | [13-18] (after p. 184) | [17-22] (after p. 184) |
| Observations on the Conifer- ous Trees of New Zealand, etc. (6 pages) | [11-12] | | | | | | | |
| <i>Pinus contorta</i> | | | | | | | | |
| PLATES AND DRAWINGS WITHOUT TEXT | | | | | | | | |
| <i>Pinus</i> (or <i>Abies</i>) <i>Smithiana</i> | | | | | | [11.] pl. (Forbes, after p. 121) | [5.] pl. (1836) [6.] pl. (1836) | [7.] pl. [14.] pl. (Forbes) |
| <i>Pinus Lambertiana</i> | | | | | | | pl. (1836, after p. 101) | pl. (1838, Forbes, after p. 144) |
| <i>Pinus burretii</i> (or <i>burretii</i>) | | | | | | | pl. (1836, after p. 101) | pl. (Forbes, after p. 144) |
| <i>Pinus Finlayana</i> | | | | | | | pl. (1836, after p. 101) | pl. (Forbes, after p. 144) |
| <i>Pinus Isolerata</i> | | | | | | | pl. (after p. 101) | pl. (1836, after p. 144) |
| <i>Pinus muricata</i> | | | | | | | pl. (after p. 101) | dr. (after p. 144) |
| <i>Pinus rostrata</i> | | | | | | | two dr. (after p. 122) | two dr. (after p. 144) |
| <i>Araucaria Cunninghamii</i> | | | | | | | pl. (1836, after p. 101) | pl. (Forbes, after p. 144) |
| <i>Juniperus communis</i> | | | | | | | | pl. (Forbes, after p. 144) |
| <i>Juniperus excelsa</i> | | | | | | | | pl. (Forbes, after p. 144) |
| <i>Cupressus horizontalis</i> | | | | | | | | pl. (Forbes, after p. 144) |
| <i>Taxus Harringtonia</i> | | | | | | | | pl. (Forbes, after p. 144) |

* The copy at Rancho Santa Ana Botanic Garden has the same number and arrangement of extra pages as that at Library of Congress but has no watermarks on the extra plates. This list of extra pages and only the extra pages 14, 15 and 16, except as noted, are numbered consecutively in the text of the copy at Rancho Santa Ana Botanic Garden. The order of the list of plates and drawings without text (at left) is that of the Stanford University copy. The copies at New York Public Library and Massachusetts Horticultural Society are without extra pages.

ABIES GRANDIS (Dougl.) Lindl. Penny Cycl. 1: 30. 1833. Grand fir. ? *Pinus grandis* Dougl. ex D. Don in Lamb. Descr. Genus Pinus. Ed. 3 (8°), v. 2, unnumbered extra p. between p. 144-145. 1832.

Abies grandis, based upon *Pinus grandis* Dougl., perhaps is not now used as Douglas originally intended, as I reported (16, p. 591-592).

ABIES PROCERA Rehd. Rhodora 42: 522. 1940. Noble fir. *Pinus nobilis* Dougl. ex D. Don in Lamb. loc. cit. 1832.

ABIES VENUSTA (Dougl.) K. Koch, Dendrol. 2(2): 210. 1873. Bristlecone fir. *Pinus bracteata* D. Don in Lamb. loc. cit., pl. 1837-1839 ?; known only in two copies.

The nomenclature of the bristlecone fir remains as in my previous summary (16, p. 592), now that the two copies of the 1832 edition of Lambert's work containing the name *Pinus bracteata* D. Don have been dated as after 1836. *Abies venusta* (Dougl.) K. Koch should be retained under Article 5 of the Rules because it has become established in usage since Sargent took it up more than sixty years ago (Gard. and Forest 2: 496. 1889). However, if the exact date of publication in 1836 of part 3 of Volume 17 of the Transactions of the Linnaean Society of London should ever be established as before December 1, as is mathematically probable, then it would be necessary to take up the name *Abies bracteata* (D. Don) Nutt. The Library of the United States Department of Agriculture has a list of the dates of volumes, parts, and pages of the Transactions, signed by B. Daydon Jackson and received May 24, 1895, but only the years of publication are given.

PICEA SITCHENSIS (Bong.) Carr. Traité Gén. Conif. 260. 1855. Sitka spruce. *Pinus Menziesii* Dougl. ex D. Don in Lamb. loc. cit. 1832.

Pinus Menziesii Dougl. may compete with *P. sitchensis* Bong., as noted previously (16, p. 488). Suringar (22; 23, 1927, p. 49; 1928, p. 54) took up *Abies falcata* Raf. (Autumn 1832).

PINUS COULTERI D. Don, Linn. Soc. London. Trans. 17: 440. 1836. Coulter pine. *Pinus Coulteri* D. Don in Lamb. loc. cit., pl. 1837-1839 ?; known only in three copies.

PINUS GERARDIANA Wall. ex D. Don in Lamb. loc. cit. pl. 79. 1832. Chilghoza pine.

PINUS MONTICOLA Dougl. ex D. Don in Lamb. loc. cit. 1832. Western white pine.

PINUS SABINIANA Dougl. ex D. Don in Lamb. loc. cit. pl. 80. 1832. Digger pine.

PSEUDOTSUGA TAXIFOLIA (Poir.) Britton ex Sudw. U. S. Dept. Agr. Div. Forestry Bull. 14: 46. 1897. Douglas fir. *Pinus Douglasii* Sabine ex D. Don in Lamb. loc. cit., pl. [47]. 1832.

The nomenclature of this species has been summarized in my previous note (16, p. 594-595). Suringar (23; also Rijks Herb. Leiden Meded. 56: 4. 1928) has discussed the nomenclature at length.

CONCLUSIONS

On the basis of the evidence here presented, most names in the extra pages of Lambert's octavo edition can be accepted as first published there in 1832. *Pinus Douglasii*, *P. grandis*, *P. Menziesii*, and *P. nobilis* all were transferred to *Abies* by Lindley in 1833. *Pinus Sabiniana* was published also by Douglas in a separate article in 1833. *Pinus Gerardiana* and *P. monticola* were published again by Lawson in 1836. There is no proof that these seven names were first published after 1832, the date on the title page, and no nomenclatural changes are needed at present in acceptance of this date.

Pinus bracteata and *P. Coulteri*, known from only two and three copies, respectively, and bearing watermark dates as late as 1837 to 1839, definitely were not first published in the octavo edition. David Don published both names in a journal article in 1836. Thus, the evidence does not warrant change of the name of bristlecone fir from *Abies venusta* to *Abies bracteata*.

The Stanford University copy, with watermark dates as late as 1839, contains five additional plates apparently not known in any other copy or edition of Lambert's work. These and six other plates were taken from Forbes' *Pinetum Woburnense* (1839) and were not first published in this copy.

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SOME NEW ARACEAE FROM SOUTHERN MEXICO

EIZI MATUDA

Monstera roseospadix sp. nov. Planta epiphitica scandens, caulibus glabris crassis 4-5 cm. diam. nodosis; petiolis gracilibus 50 cm. longis usque ad 40 cm. vaginatis, geniculo ca. 5 cm. longo; laminis perfectis, oblongo-ellipsoideis, basi semitruncatis, apice semiacutis, 45-58 cm. longis 25-28 cm. latis; nervis pinnatis numerosis utroque ca. 50; pedunculis 30 cm. cum bractea amplectente albi-virescente 35 cm. longis; spatha viridiflava decidua 28-30 cm. longa cuspidata, 7-8 cm. lata; spadice usque ad 18 cm. longo, 1.5 cm. diam. roseo, floribus hermaphroditis sine perianthiis.

Mexico. Chiapas: in wet forest near Finca California, Col. Turquia, Escuintla, at 150 m. altitude, 8 September 1947, *Matuda*